EVOLVE UK

Opportunities and Risks in the UK Construction Industry

June 2020

ENTERPRISE IRELAND

Contents

Foreword

This report has been written in partnership with Primary Access. It has been our objective to identify and analyse key opportunities and risks in the UK Construction Industry as we emerge from the strictest Government lockdown measures in modern times. The information presented in this document has been collected from a number of sources including interviews.

The health and prosperity of the UK Construction sector is inextricably linked to the success of Ireland's, with tens of thousands of households in both countries benefiting from €100's of Millions of trade each month.

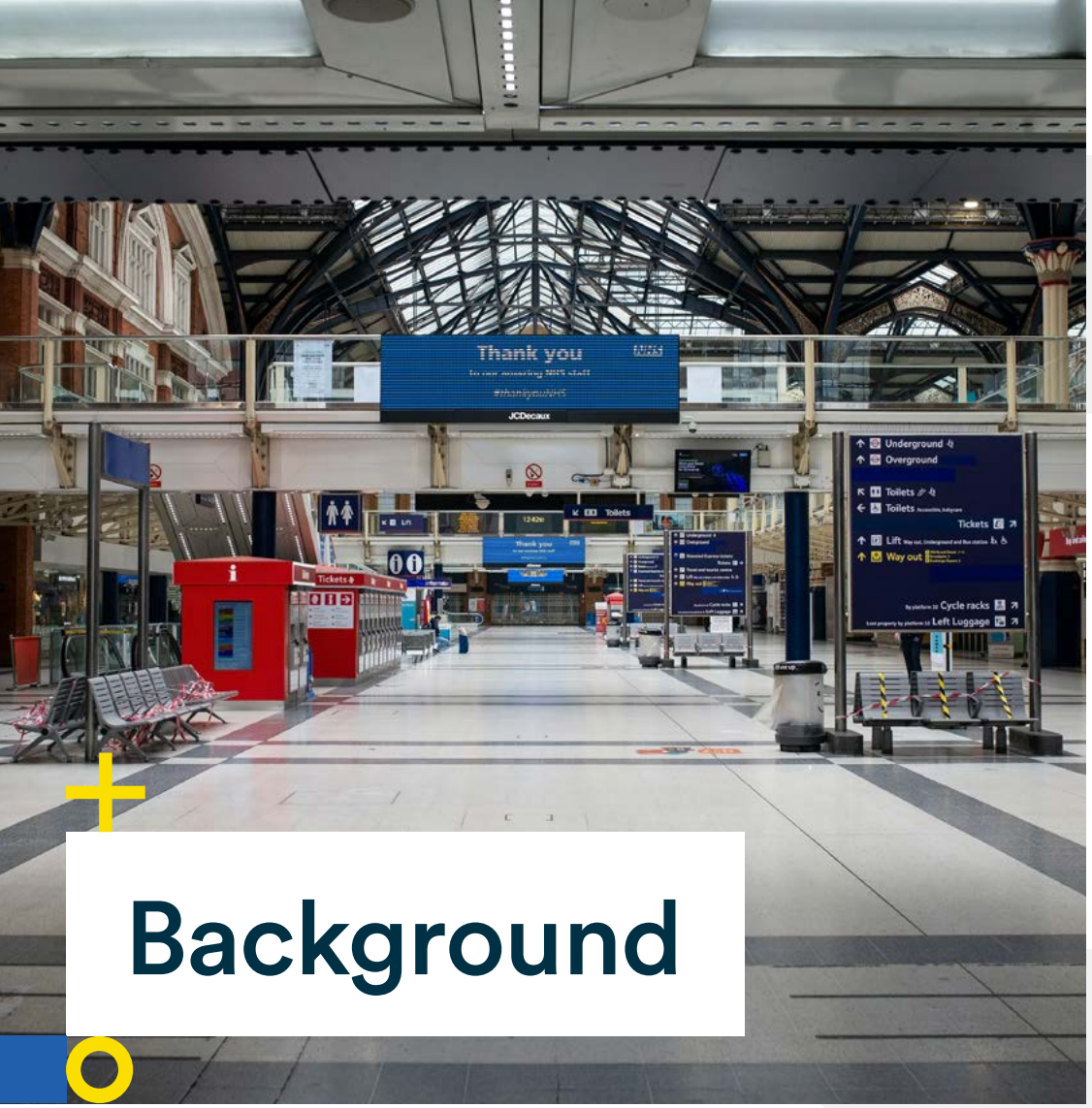
Prior to the pandemic, the industry was in transition. A number of competing legal, political and sociological priorities s were shaping the direction and speed of travel. Safe buildings, net zero carbon, 'levelling up of the UK' and of course, the future trading relationship with the European Union were layered over a maturing, digitally driven pursuit of increased productivity and value.

The return to business in June, following the UK's pandemic peak in April, presents an opportunity for the industry to re-set with the ambition for a closer fit to the needs and requirements of tomorrow. For most, an opportunity to re-build in the image of the businesses we would like to be, 'future ready,' rather than the businesses we have been.

Transformation will still take time and investment, both commodities in short supply for the majority that are focussed on pipeline, working capital and safety. The Construction Leadership Council's 'Roadmap to Recovery' published on 1st June sets out some key steps to 're-inventing' the industry with a timeline that recognises some of these challenges. More so, it is the sectors that need to adapt the quickest, that have been hit the hardest; further impacting their ability to invest and pivot.

As we work through stabilising and re-setting, and in advance of 'reinventing', this report has set out to help navigate the opportunities and challenges before us. The shocks to turnover vary greatly by sector as does the ability to investment in a more productive, resilient future. Enterprise Ireland envisage a construction industry that is shaped and connected to the communities we serve and will continue to invest and support the most innovative, ambitious and capable organisations and partners.

John Hunt
Senior Advisor, Construction, Enterprise Ireland

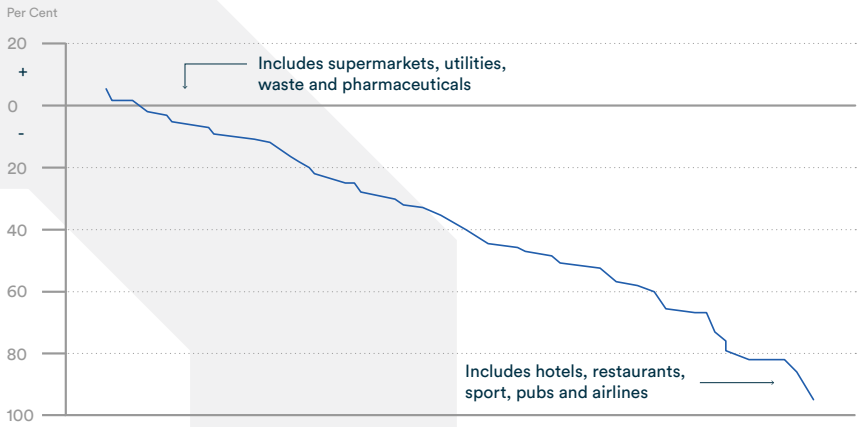


Background

The nature of the Coronavirus-19 pandemic has delivered a very asymmetric outcome across economies globally. In UK terms the graphics below, sourced from the Bank of England May 2020 Briefing, clearly demonstrate this by sector, both in terms of impact on sales and investment intentions.

The shock to turnover varies by sector

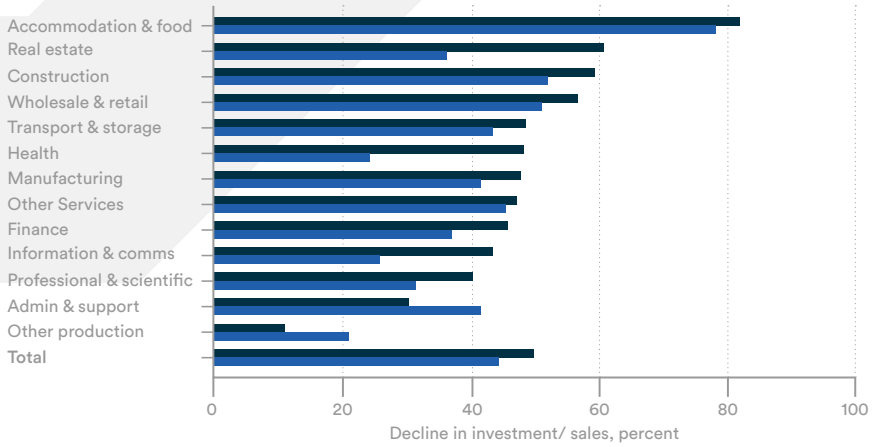
Average turnover shock applied by sector and subsector in 2020 Q2[(a)(b)]



Sources: Bank of England, Fame (Bureau van Dijk), ONS, S&P Capital IQ and Bank calculations.

Many firms expect Covid-19 will materially reduce their business investment and sales in Q2

Average expected impact of Covid-19 on business investment and sales in 2020 Q2[(a)]

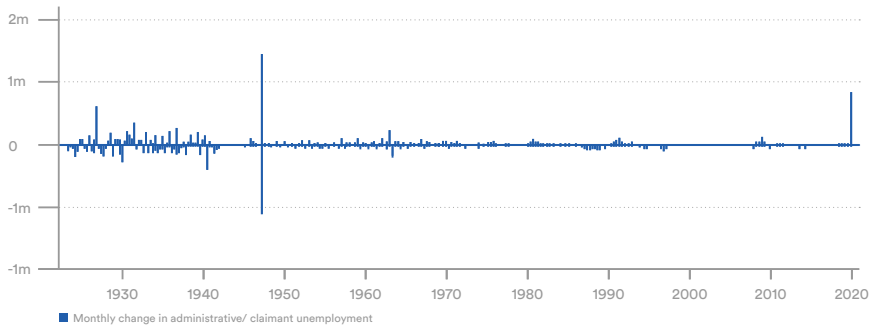


Sources: DMP Survey and Bank Calculations

Their report also record unprecedented declines in measures of consumer confidence during April 2020, as defined by personal financial situation expectations, general economic situation expectations and employment expectations. While hardly surprising in the circumstances, the trajectory to recovery across individual sectors will also inevitably prove asymmetric, and the speed of recovery will depend upon a general restoration of confidence.

The worst since 1947

This many people have not signed up for benefits in a single month in more than 70 years

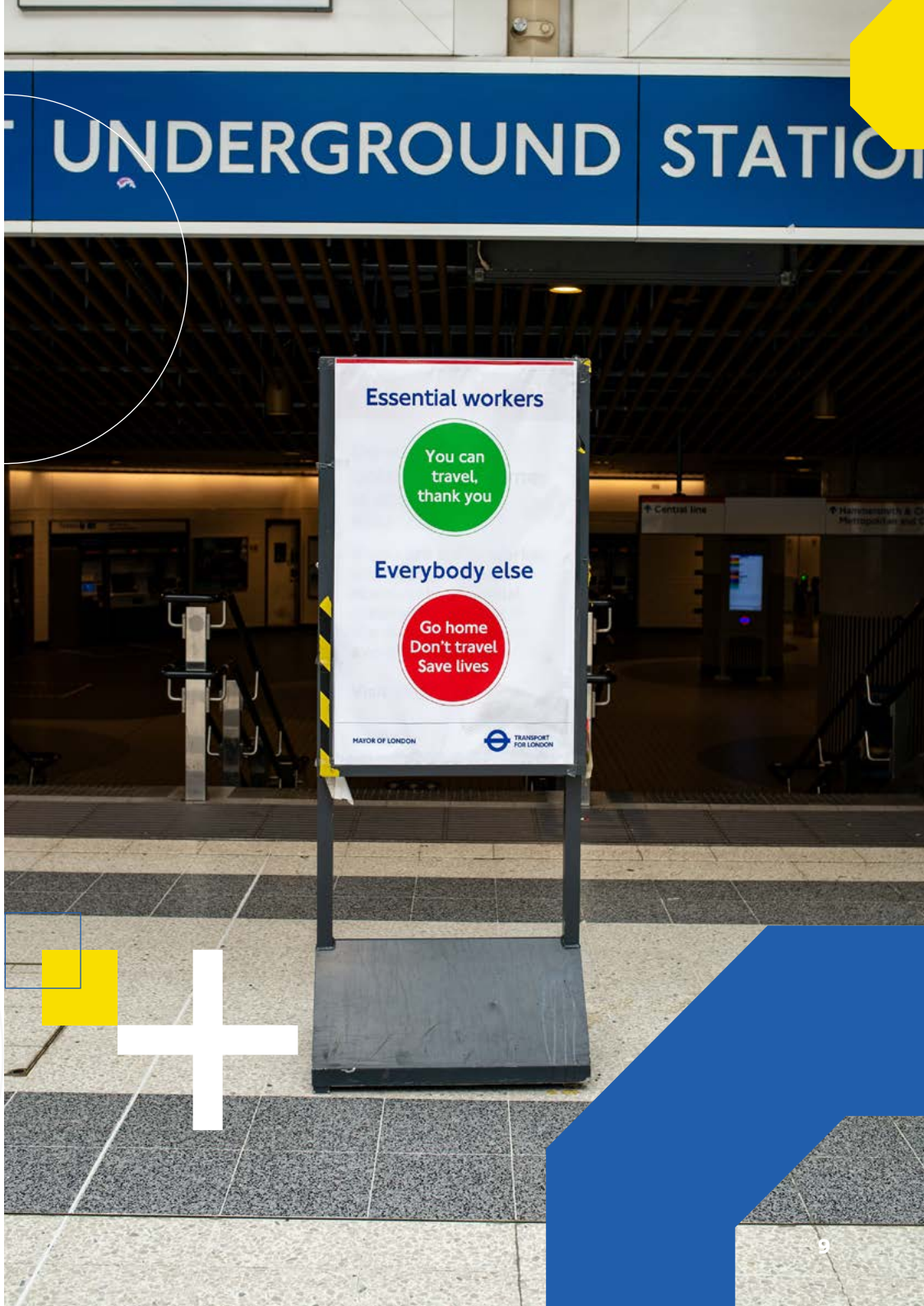


Sources: Institute for Employment Studies

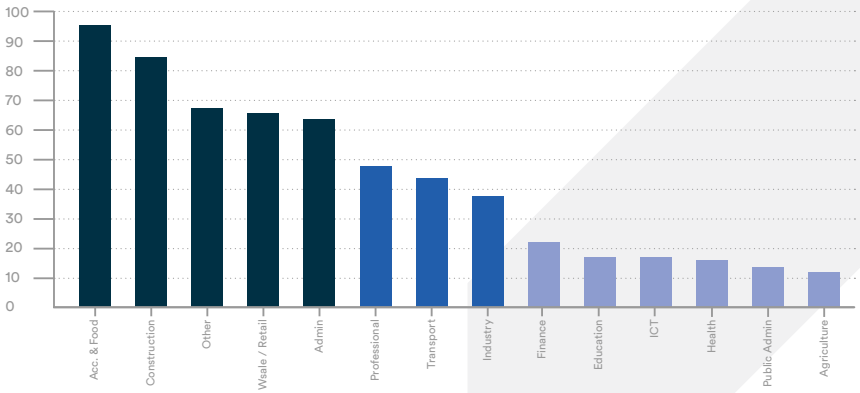
Retail sales fell by more than one-fifth

Shoppers have simply not been able to go out

Sources: Evervlz.com



Percentage of Q4 2019 unemployed

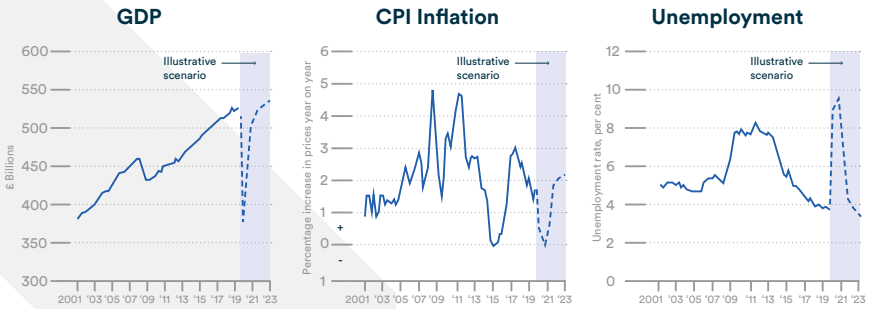


Sources: Goodbody

Of concern in terms of a 'back to normal' preparation is polling in the UK highlights persistent differences in attitude toward easing lock down measures. Since the Prime Minister revised these recommendations, one survey found while there was a balance between support (44%) and opposition (43%) 91% of the latter group say "*it is because it goes too far in relaxing the rules, compared to just 3% who say it doesn't go far enough.*" What this suggests is even as official guidelines encourage going back to work, school and general recreational activities, there will remain considerable resistance among certain sections of the population for whom the initial messaging of threat and fear has been truly taken to heart. These observations question expectations about what constitutes 'back to normal' and compounds the unique nature of this pandemic: the extent to which it hits both consumption and production. This winter (and in all probability before a vaccine is in the market or herd immunity achieved) a 2nd wave is very likely, potentially aggravating the situation before we have clarity on the recovery path. We don't forecast a return to the past but instead seek to look forward to the opportunities of the future. We don't forecast the virus mutating into something more benign or more deadly, but those scenarios are also possible. We are in relatively unknown territory.

In its 'Illustrative scenario for UK economy - Framework for thinking about the easing of the lockdown', the Bank of England Briefing presents the following graph for their estimates of GDP, inflation and employment, suggesting it will be 2023 before a full recovery may be measured. This recovery pathway will, unfortunately, come too late for many of the marginal operators in exposed segments of the economy.

GDP, unemployment and CPI inflation in the scenario



Sources: ??????????????????

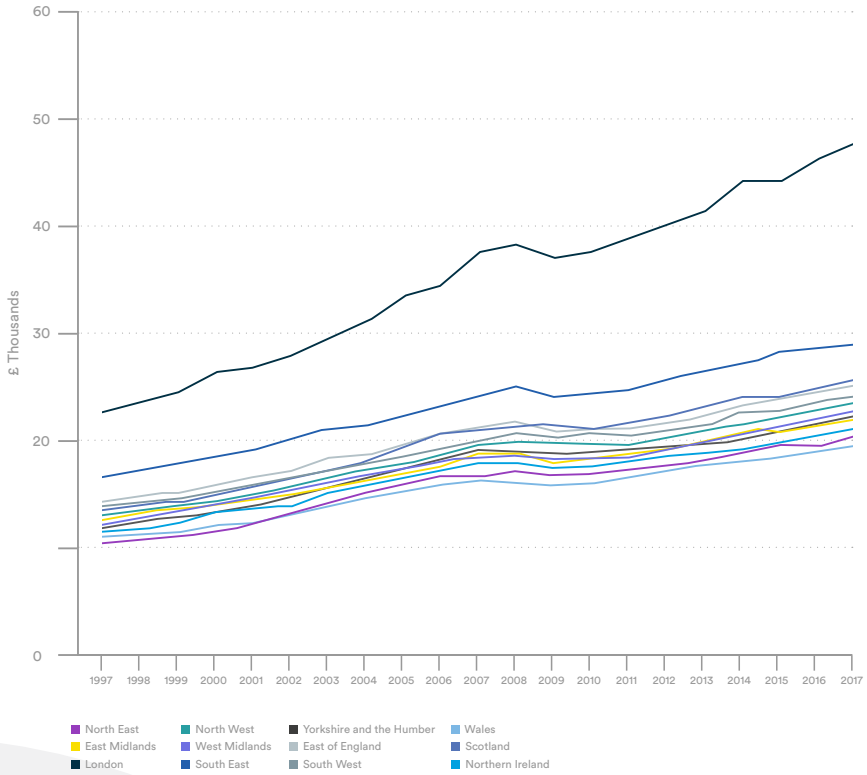
It is worth keeping in mind from a longer-term perspective what had been planned and anticipated from the March 2020 UK budget before containment measures around Covid re-ordered immediate priorities. The Centre for Policy Studies (CPS) is an influential think tank, many of whose ideas have been incorporated into (mainly) Conservative policies. An October 2019 report from the CPS *A Rising Tide: Levelling Up Britain* was launched by Communities' Secretary, Robert Jenrick MP.

Its central premise was the UK had a regional imbalance resulting in large disparities in relative income and economic outcomes between London and the South East and the rest of the country captured by a range of measures of which the graph below is but one of many striking examples. The CPS study made several recommendations as to how this could be re-aligned and 'level-up' the opportunities and economic prosperity of those regions most requiring regeneration.

Among the CPS' most radical suggestions were:

- Decentralisation of government funding, noting the UK had a significantly higher share of centralised tax receipts than the OECD average;
- Devolution of key decision making to the regions supported by a new Devolution Bill;
- The establishment of a new National Infrastructure Fund;
- An emphasis on particular key sectors – rail & road connectivity, 'Opportunity Zones' with tax incentives to create more local trade flows, & introduction of free ports;
- An upgrade to investment in skills shortages;
- An upgrade to investment in digital connectivity, green energy and utilities.

GVA per capita, by region (1997-2017)



Source: ONS, 'Regional gross value added (income approach)'

Given the Conservative election success and in particular the size of its majority being primarily due to so-called 'Red Wall' constituencies, there was widely acknowledged credibility to the expectation of many the CPS report's recommendations would be incorporated into Chancellor Rishi Sunak's maiden budget. The fact that as an MP he was one of the most vocal proponents of free ports there was little reason to imagine he would have feared making bold and imaginative reforms along the CPS lines. Fundamentally 'levelling up' remains a cornerstone of Conservative Party thinking and may yet form part of the post-Covid recovery imperative.

In our analysis we attempt to capture what 'new normal' could look like and to answer important questions with industry leaders, experts and academics. Among these are:

- Which sectors and sub-sectors will recover quickest and slowest?
- Which business trends will accelerate or stall?
- Identify new trends that will emerge.
- Which industries will be relatively stable and lower risk?
- Highlight new opportunities as business adapts to the new operating environment
- Assessing the new geopolitical landscape and where trade barriers increase for Irish companies.
- Evaluating the trade landscape and how US, UK and EU moves impact Irish business opportunities.
- Reconfigured supply chains and if this is an opportunity or risk.

We hope these will prove helpful and insightful.

Sector Analysis

Investment in the Residential Sector, during 2019 represented over 30% of total industry spend, making it the largest single sector of the UK Construction Industry. Traditionally, one of the most volatile sectors and the most closely linked to consumer confidence and investor outlook. In April 2020, Housebuilding suffered the largest slump of all construction sectors, with work on both public and private sector residential work falling by around two-thirds compared with April 2019. This decrease compares with an average of circa 40% across all construction sectors. Nonetheless, the outlook for Build to Rent has a more optimistic prognosis.

Private Rental Sector & Build to Rent

Industry Background

Additional regulation, higher stamp duty, reduced mortgage relief and tenant affordability have led to many buy-to-let investors exiting the rental market, with the number of private landlords hitting a seven-year low in 2019, according to data from Hamptons. Government 'Help to Buy' schemes have been a further disincentive to become active in PRS.

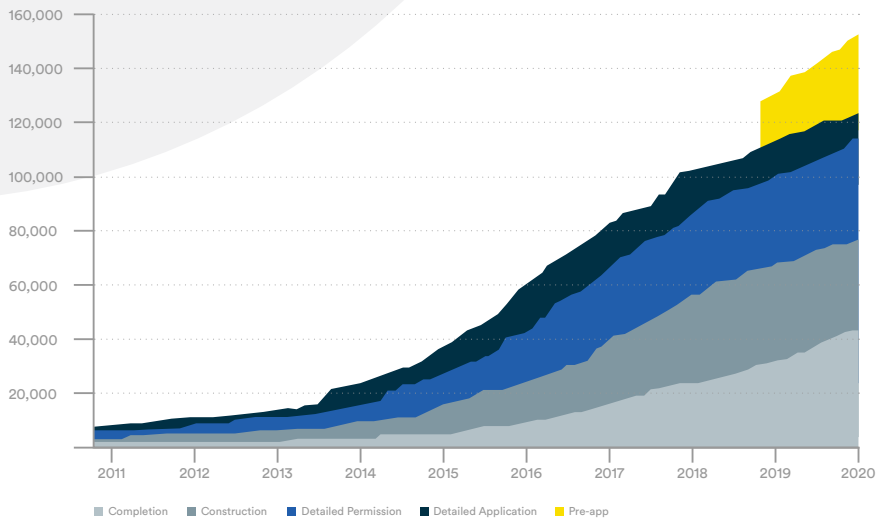
The undersupply of rental accommodation is likely to continue and become more acute as mortgaged buy-to-let landlords exit the sector (40,000 UK buy-to-let redemptions per year for past three years). At the same time, housebuilders are also more likely to be open to opportunities for bulk deals with investors in order to make up for lost owner-occupier sales. It would not be a surprise to see institutions playing a significant part in the housing market recovery post-Covid-19 – see HBF policy director, David O'Leary's, comments on this in his interview commissioned for this report.

During the same period, the Build to Rent/Let sector has been flourishing, according to figures from estate agents, Savill's who note: *"The scale of Build to Rent continues to grow, with the average size of schemes in the planning pipeline (309 homes) now over twice that of completed schemes (144 homes).*

"The average size of Build to Rent schemes has increased particularly quickly outside of London. The average completed scheme is now 163 homes outside of the capital compared with 128 in London. This shows that investors have become more comfortable with Build to Rent outside of the capital and are now delivering at scale across key regional hubs.

"A landmark scheme has completed this quarter becoming the largest completed scheme outside of London. Chapel Wharf is located in the heart of Manchester and comprises 995 apartments arranged over four blocks of up to 22 storeys."

Number of build to rent homes



Source: Savills research

The Covid-19 pandemic and related lockdown has exposed the PRS sector of the UK residential housing market to 'perfect storm' conditions.

These problems for many private landlords compound by their relative over-dependence on young renters, many of whom are employed in the 'gig' economy or lower than median paid occupations in sectors most at risk from permanent damage from the Covid disruption. According to ONS data, businesses most impacted by Covid lockdown restrictions source between 47% and 65% of their workforce from the 16-34 age group cohort who, in turn, represent 47% of PRS tenancies.

Sector	16-24 Group Workers	25-34 Group Workers	16-24 Workers %	25-34 Workers %
Retail	641,574	673,861	22.9	24.0
Hotel & Other	68,528	66,638	27.8	27.0
Restaurants	343,380	202,107	41.0	24.1
Hairdressing	54,554	79,690	19.2	28.0
Sport & Fitness	112,059	74,560	33.7	22.4
PRS Tenants, %	12	35		
2020 ONS average pay, £	16,250	24,450		

Source: ONS

Much of the government in response to the outbreak have targeted supply side issues, with furlough programs intended to keep the workforce 'live' even if temporarily 'inactive'. Fears have been expressed the unemployment rate could balloon once these measures have been removed, and while recent press reports have hinted at additional government stimulus packages, some feel more could be done immediately to assist the private housing market.

Mary Bowring, managing director of Ringley, a company specialising in the Build to Rent market voices those concerns: *"The government should aim to stimulate housing market activity post-lockdown by abolishing the 3% stamp duty surcharge for buy-to-let landlords buying additional properties.*

Millions of Brits were already renting, and that number was predicted to grow anyway with or without coronavirus. The disruption caused by coronavirus will likely see rental demand grow, as banks squeeze potential buyers with tighter lending restrictions and people put off buying or selling a home as it becomes clearer Covid-19 will cause continued uncertainty and disruption in the medium term.

Eliminating additional stamp duty for buy-to-let investors would help stimulate the supply of rental homes while also driving wider activity in the housing market. Landlords are a crucial source of development finance through off-plan sales and will help support getting Britain building again."

↘ The Road to Recovery

This is a sobering background from which to estimate the likely recovery trajectory of the PRS and BtR sectors. So, how can a remotely positive outlook emerge from such profound market dislocation? Part of the good news must be, as David O'Leary, policy director at the HBF confirms in his interview *"aside from health, housing remains the number one priority for the public and politically, and is supported on all sides of the House."*

In addition, all major UK house builders and civil constructors had been gearing up for a strong period of activity following the decisive December general election result which had cleared any lingering uncertainties about the direction of travel, and household surveys were upbeat. Prior to Covid, the budget had been expected to showcase major infrastructure projects as part of the regional levelling up manifesto. These will remain key objectives when circumstances permit.

Since the lock down house builders have been swift in their actions to re-order their HSE protocols to ensure safe practice for their employees is understood and enforced. Critical players, such as Taylor Wimpey, have introduced pre-payment schemes for key self-employed sub-contractors. Meanwhile, estate agents and developers alike have moved to 'virtual' viewings and 'appointments'.

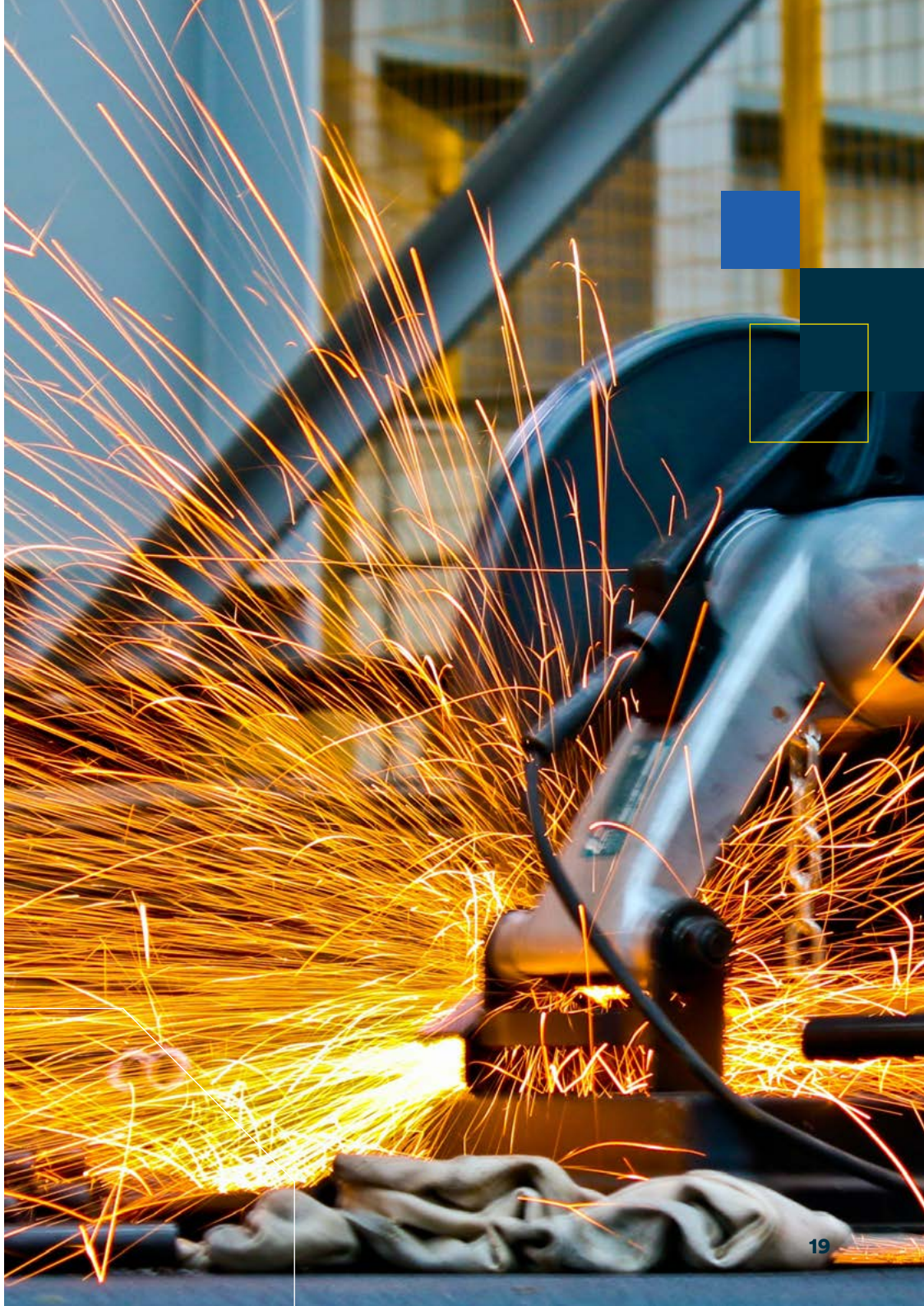
↘ A view from the 'coal face'

In order to understand some of the practical difficulties encountered operating under lockdown conditions we spoke to the founder and CEO of a long-established house builder located in the North West of England. This is what he what he had to say:

Lock down enforced closure of active sites aside, what residual operating restrictions concern you most in terms of leading a house building industry recovery?

We haven't lost a day's work as the Government asked us to do so (albeit a few of our staff have worked from home as they could), just a number of companies read the script wrong and some PLC's acted on a PR reason. This has helped us make really good progress on the opening of a new scheme and a new phase on another with the infrastructure works. We have had supply chain issues, some resolved quickly and others when they have been given the go ahead recently, like plastic windows.

We should now NOT experience any operating restrictions on sites, we are



waiting for the Surveyors to get on top of their work to release the housing chains for a number of completions but these are really short terms issues. For the medium term we do need the mortgages to increase their %LTV as this will slow down sales despite there being a pent-up demand at all levels for a better home.

To support the sector, I do think the Help to Buy should be extended or at least 6 months as the ones that had hoped to complete before the end of March 2021 have to be completed for Dec this year which has been made more difficult now.

Are there particular sectors of the house building industry likely to require additional policy support, and how important is any regional component to this?

Policy support, is Help to Buy above but also shaking up the Local Governments who don't always help at the best of time have got worse especially the Planning Departments, closely linked with the Section 106 agreements that go with the Planning Approval Notice. We are desperate to start on a site in Lancaster which has been held up from last year and looks like it still won't go to the June meeting, aargh!! These same local authorities continue to make policy changes that are making our life very difficult, it's amazing how these are done quickly and effect schemes already submitted. This is very annoying as we have to change all house types on the scheme and also all the reports accordingly due to different sizes and effect on drainage and the like.

My team jokingly said last week we are now after 5 years on a 107 version of the same house, not fun and they all differ from Authority to Authority so site to site, so it's very easy to make mistakes on site with the wrong drawing.

I must say the House Builders Federation (HBF) are doing a great job lobbying the Government and various Ministers on behalf of the Industry with the New Ombudsman and many other issues as and when they crop up, like pursuing the RICS body to get back working, safely of course.

Anecdotally and from your own experience, what lasting changes are going to affect the house building industry as a result of this s hock, and what measures of industry innovation will be most powerful in the post-Covid world?

An interesting question, I think there should be little impact unless if there is a 2nd wave, I personally think they need to release the lockdown a little more quickly so that they can manage the spread of the virus now rather than later in the year, whilst protecting the vulnerable of course, otherwise we could have a 2nd wave over the winter months again. At the moment what they have done could in fact be inflationary, with house prices rising next year but then it will make up for a zero increase this year despite some people predicating a drop in house prices in 2020.

My note above are so the house prices are protected this year and not go into a recession, as that in itself really doesn't help the market, which the Government need to manage as a result of this lockdown.

As for innovation, I do think we are building better homes than ever before with the Building Regulation changing every year to go for zero carbon houses in a few years' time.

↘ The Importance of Innovation

This is an important time to be thinking more innovatively, and re-consider whether further elements of Modern Methods of Construction (MMC) need to be incorporated into construction and house building standards. As Mr. O'Leary points out in this respect: *"essentially in current circumstances it will become more prominent, get more take up if it allows production capacity to be maintained in a socially distanced environment."*

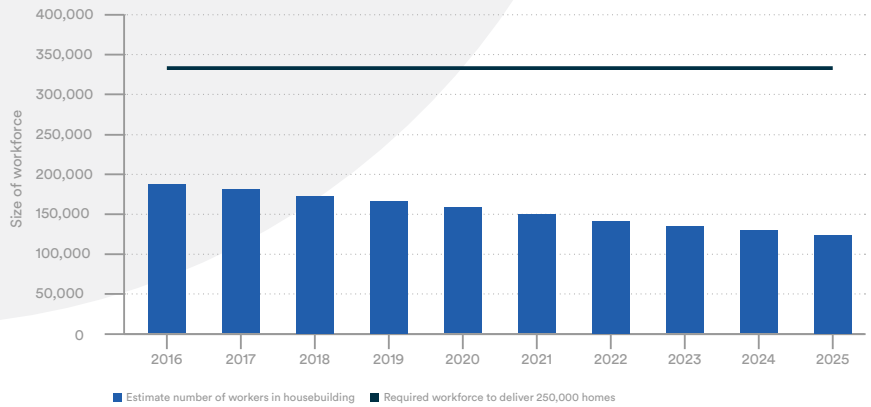
The Farmer Review of the UK construction labour model, published in 2016, provided a number of specific recommendations for the industry, but uptake of his report's suggestions has been patchy. Mr O'Leary wonders whether the Covid pandemic provides ideal motivation for some of Farmer's messages to be considered more seriously. Here are some good reasons why:

- Construction has the lowest level of R&D expenditure of any UK sector surveyed.
- Agriculture aside, construction provides the least employee training as a proportion of the industry workforce.
- Construction has the highest reliance upon self-employed among UK industry's surveyed.
- Construction has the highest proportion of SMEs relative to any other UK industry surveyed.
- Construction has the lowest productivity growth of all UK industries surveyed.

Added to which it has a high reliance upon overseas and migrant workers whose status may become questionable in a post-Brexit world. The HBF estimate 20% of house building employment is comprised of non-British nationals, rising to 50% or more in areas such as London and the South East. This is not a business model for a post-Covid recovery.

The Importance

Housebuilding sector: Forecast workforce vs Required workforce



Source: The Farmer Review of the UK Construction Labour Model by Cast Consultancy

Construction will clearly have a large part to play in any post Covid economic recovery but the industry is also clearly at a pivotal moment in its evolution and many of its structural flaws will be exposed to a wider public because of Covid, and possibly exacerbated because of Brexit. In the new world of social distancing how will that be made to operate on sites? How do you 'track and trace' in a working environment where mobile phones are banned? What are the insurance implications of this? How will sites be differentiated - it is easier to socially distance when building a single family house than an apartment block? How does this play with Health & Safety rules and their enforcement?

Building Information Modelling (BIM) and all its variants will continue to play an increasingly important role as the industry pivots to a more digitally oriented design and manufacture approach. It should not be forgotten Britain's Olympic Village for 2012 was built entirely on BIM knowledge – 6,000 or so apartments were 'constructed', built off site in a factory with all of the façades, kitchens and bathrooms assembled on production lines - one for plumbing, one for joinery etc, then dropped in to the apartment and connected to utilities within half an hour and all without a single fatality.

Ilke Homes: Over the past two years, incredible momentum has gathered around the use of modern methods of construction (MMC) in the UK. Government support, customer demand and sizeable strategic investments have moved alternative ways of building homes much closer to the mainstream. Amidst all of this, the housing sector has emerged as a key driver and demand generator for MMC. It's where the benefits of doing things differently can have the biggest impact for local communities.

Volumetric construction is a type of modular housebuilding that sits at the most 'modern' end of the spectrum of modern construction methods, the one most different from traditional approaches. Dave Sheridan, Executive Chairman, *"for ilke Homes it's been quite a year for modular. Big investments have been made, processes have matured and confidence in product and process is increasing. For us manufacturers, it's easy to get swept up in the excitement. And yet, we're only at the start of our mission. Let's not forget our common goal: to build a lot more homes quickly. And make them better homes too. Serial manufacturing has democratised access to great quality products. We can do the same for homes"*.

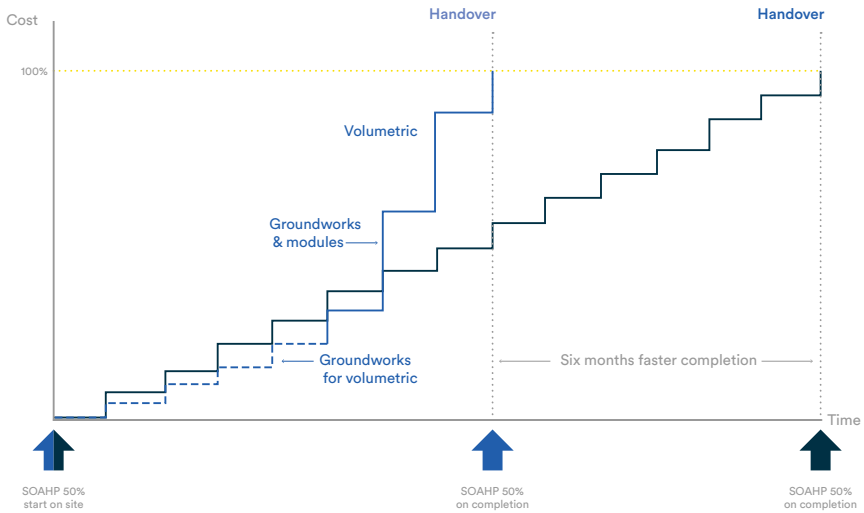
In November 2019 ilke Homes announced it had secured £30m of direct government investment to boost capacity at the company's Yorkshire production facility. This is the first time the UK government agency has ever invested directly into a modular housing factory and is testament to Homes England's 'dynamic approach' to addressing *"structural issues within our housing and construction industries,"* said ilke Homes' Executive Chairman Dave Sheridan.

The deal, which has been endorsed by the likes of housing minister Esther McVey MP and government advisor Mark Farmer, will be a huge boost for the offsite manufacturing industry as Homes England continues to champion MMC. This is a *"bold policy"* that will help fulfil *"people's desire to own their own homes"*, the minister said. Among the benefits claimed by supporters of modular construction are speed of delivery, sustainability in materials, low energy costs in houses built (as little as £1/day) and their suitability for social and lower affordability sectors of the market.

If modular is to reach new heights in delivering high quality, sustainable housing across the UK, support from the public sector is crucial. Set up costs for manufacturers who build homes in factories are far greater than traditional firms. A lot of capital has to be ploughed into securing a factory, developing machinery and creating templates for modular homes.

With government backing from bodies such as Homes England, vital support can be given to SMEs starting out in the modular world, where Nick Walkley, Chief Executive at Homes England, explains there is *"huge, untapped potential by creating more construction capacity"*. This will allow smaller companies to begin thinking about long-term strategy at an earlier stage. http://www.cast-consultancy.com/wp-content/uploads/2019/03/MMC-I-Pad-base_GOVUK-FINAL_SECURE.pdf

Cash position and SOAPH grants: Volumetric v Traditional construction



Note: Timescales and payment milestones shown here are indicative and can vary depending on scheme size, manufacturer and terms agreed.
SOAHP: Shared Ownership and Affordable Homes Programme.

Source: ??????????

Quintain Tipi: In May 2016 Brent Council approved a new Masterplan for one of Europe's biggest regeneration projects. As part of this £140 million redevelopment investment is planned into new community infrastructure across Wembley and Brent including a new form three entry primary school and nursery, a new GP surgery and community amenity space.

In February 2017 it was announced Wembley Park is set to become the largest build to rent development site in the UK, with 5,000 homes being delivered by 2024, all of them under single management: Quintain's build to rent management brand, Tipi, will manage all 5,000 build to rent homes at Wembley Park, *"offering brand new beautifully designed apartments with iconic views and 24-hour inspired services."* The first scheme sold out in less than six months.

These services include:

- Dedicated professional landlord; as Quintain both own and manage the apartments through the onsite Tipi team, there are no agents and no unnecessary fees
- Rent includes utility bills; water electricity and 40mb/s of fibre optic broadband
- 42 acres of shared amenity spaces including landscaped communal gardens with water features
- Excellent transport links with Metropolitan Line, Jubilee Line (with Night Tube) and National Rail all within walking distance
- Resident lounges, a cinema room, gym
- 24/7 concierge
- Online portal for residents
- Pet-friendly apartments available
- Low carbon energy centres and district heating
- Envac site wide waste disposal
- Site wide IT infrastructure

In an 8 June 2020 press announcement 'Quintain reported the sale of 213 homes at Wembley Park to Legal & General Affordable Homes (L&G). The £62m deal marks L&G's first acquisition from Quintain and in Brent. The homes are in Wembley Park's Vantage and Bowery developments and represent the latest affordable homes to come to market as a result of Quintain's investment in Wembley Park over the past two decades.

‘So far, Quintain has built over 1,400 affordable homes as part of their £2bn investment to date at Wembley Park, in housing, offices, public space, retail, restaurants and cultural spaces across the 85-acre estate.

‘All 99 units sold in the Bowery development are homes for affordable rent, each meeting The Mayor of London’s size standards and each with their own private balcony. These homes also have a shared garden with a neighbouring block to the west and look out over the new 7-acre park to the north. They sit next to a play park and multi-sports games area and will have a nursery and large gym nearby. Residents also benefit from underground parking.’

“Quintain has the unique ability to develop and asset manage Build to Rent to scale, delivering on a strategy for long term ownership and investment”, according to James Saunders, Quintain Chief Executive.

According to Savill’s *“a growing number of investors in the UK are understood to be pursuing family housing rental models. This has been slow to take off in the UK as development in the sector has typically focused on high-density projects in inner-city locations, where tenant demand has been easier to underwrite. However, inner-city schemes are typically more capital-intensive and we may see family housing models gain further traction in the second half of 2020 and into 2021. In fact, Covid-19 may accelerate this emerging trend.”*

↘ Challenges

Building sites in particular, have seen few productivity gains over the years but a combination of social distancing and a possible slow- down of availability of qualified artisans from third countries suggest that employers will face an even more urgent necessity to measure and improve productivity - how? Note that anecdotal evidence via the HBF suggests that on sites which have introduced a one-way system productivity has improved by a statistically significant amount simply because workmen have been incentivised to actually take all the tools that they will need to complete a job with them at the start of a shift! https://www.constructionnews.co.uk/agenda/opinion/buildings-must-become-transformers-to-cope-with-future-crises-29-05-2020/

Our research and work with digital technology providers have uncovered a number of solutions that have steepened their growth trajectories through the lock down period. I3PT’s SAAS platform ‘CertCentral’ has remote building quality control and occupant safety at its core – a key component when managing and maintaining manufacturing quality offsite or with fragmented, sub-contract labour on site.

Similarly, Flowforma have successfully integrated their ‘paper to data’ digital process platform with the Microsoft Teams App and is being rolled out within some of the largest UK Contractors and across the most progressive SMEs. A recent round of funding has secured the further international expansion of construction tech company GoContractor. Between April and June, GoContractor are well on their way to safely inducting over 200,000 site operatives with new safe site operating procedures across North America, Ireland and the UK.

+ Education Sector

Regionally, many university cities are going to be hit hard, with as much as 10% of the local rental stock in cities such as Exeter, Nottingham and Newcastle dedicated to student accommodation. David Cox, of Arla Propertymark, a trade body for letting agents, said *"student accommodation agents are looking at the possibility of their entire business disappearing for 12 months."*

Covid will exacerbate the threat to private landlords from the Purpose Built Student Accommodation Sector. Unite Students, a PBSA provider, waived rent for students who left their campus during lock down at a cost of £100m. The company expects to gain significant market share from private landlords in the recovery phase.

Not everyone is so sanguine. An analysis by the Higher Education Policy Institute (HEPI), an Oxford-based think tank, found universities in England and Northern Ireland received around £8.5 billion for research in 2017-18, but spent £12.2bn which they made up for with the £4.9bn paid by non-EU students in tuition fees.

"My sense is home students will enrol at university in similar numbers to previous years. Because what else are they going to do? If they don't go to university, they're not going to be able to have interesting gap years," says Nick Hillman, director of the HEPI. EU students, he adds, may still be willing to come to the UK before their tuition fees go up post-Brexit.

But the number of foreign students from outside the EU will likely drop significantly because of movement restrictions, safety concerns, and the cost of tuition and living. Some students simply may not want to come all the way to the UK for a predominantly online course. *"The question is not only how many people turn up in the autumn, it's also how quickly demand recovers afterwards,"* says Hillman. *"So even if it is down very, very dramatically for one academic year, does it recover the following year?"*

https://www.wired.co.uk/article/university-online-coronavirus

↘ Green Shoots & Greening?

The productivity challenge becomes critical in these circumstances. As ever following a crisis those that adapt best to a changed landscape will be the relative winners. Those better resourced financially and technically will be advantageously placed. What seems certain in the short to medium terms is more is going to have to be done off site – this presents issues where social distancing is more of an issue such as smaller apartment developments.

Consultants McKinsey expands: *"Real Estate leaders will feel an even greater sense of urgency than before to digitise and provide a better-and more distinctive tenant and customer experience. Many developers can't obtain permits and they face construction delays, stoppages, and potentially shrinking rates of return.*

Post-Covid public-health officials may increasingly amend building codes to limit the risk of future pandemics, potentially affecting standards for HVAC, square footage per person, and amount of enclosed space."

Grainger plc is firmly on message – from its half year report: Since Covid business has been focused on 3 key areas: Innovate, Communicate and Improve. New ways have been devised for serving our customers remotely and enabling safe transactions through the use of technology and virtual viewings. Increase in Investment in training for employees in light of Covid has resulted in the launch of the internally-developed, bespoke training programme, the Grainger Academy.

Helpfully adding, from a recovery perspective, there is activity still in the PRS sector: Waterloo planning consent: Plans for redevelopment and deliverance of 215 new homes for the PRS portfolio. 4 new schemes have been acquired during this period: Capital Quarter (Cardiff), Exchange Square (Birmingham), Queen's Road (Nottingham), & Canning Town 3.

Persimmon trading statement: *"possibly most interestingly, completions per week have ticked up over the last two weeks. The group now states that completions over the last 8 weeks stood at 1,300, meaning that 352 homes were sold in the last two weeks which implies that weekly completions over last two weeks have picked up to c.176 units per week. It is also noteworthy that reservations grew to 1,351 in the last weeks 8, implying a tick up of 389 units in the last two weeks and all the while cancellations levels 'remain in line with historic trends."*

"Although it must be noted that one should never read too much into such a short period of data, it is positive to see some early signs that completions are set to tick back up as lockdown measures begin to be eased."

Institutional investors will continue to play their important role. L&G enforces the point that they are still open for business, no matter how damaged the sector is on a near-term view. 28th April 2020: L&G signs £150m Sheffield City Centre regeneration, unlocking City's post-crisis ambitions, by announcing it will invest £150m into Sheffield's West Bar Square development. The development will comprise 200,000 sq. ft. of Grade A office space, 350 'Build to Rent' Homes. CEO, Nigel Wilson commented in the related press release:

"During these unprecedented times it is absolutely imperative that institutions continue to push forward with deals such as these, so we can position the UK for an accelerated recovery." In May they further announced the £65m forward funding completion for The Lumen Building in Newcastle Helix, the largest privately funded office to be built in Newcastle's city centre in the last decade.

The construction sector can be helped back on its feet with a wave of schemes aimed at cleaning and greening our homes and public buildings. Renovation projects can be rolled out quickly, and around 60% of spending on home energy efficiency retrofits would go directly to local construction workers. A focus on social housing, schools, hospitals and other high-impact infrastructure could give a boost to the hardest-hit communities and make a major contribution to economic recovery.

There will doubtless be a considerable number of smaller projects to re-purpose office blocks for the post-Covid acceptable work environment. We have seen elements of this already with the speedy installation of Perspex protection screens at the checkout tills of our major retailers and petrol stations – small but very welcome jobs to keep contractors liquid. UK Transport Secretary, Grant Shapps, in early May announced an additional £2bn of funding to upgrade the UK electric charging infrastructure – again small but incremental investment which will benefit many local contractors. The Construction Leadership Council on June 1st published its Road to Recovery proposals, which include several of the elements described above.

↘ Relative Winners in PRS Sector

Taking into account the highly fragmented nature of the PRS and its high exposure to legacy (analogue) stock, the ability of this sector to adapt in a co-ordinated and collaborative response is doubtful. Understandably, many operators will have highly individualised priorities such as concerns about personal leverage. Taking the bigger picture into account is unlikely to be on their immediate horizon as they assess the fallout. However, the changed environment plays strongly into the hands of those in the Build to Let/Rent sector which, though still relatively small in overall proportion, is nonetheless better structurally suited to lead the recovery.

Though currently only having 150 members, the UK Apartments Association (UKAA) trade representative body has, in Greystar, a powerful and experienced anchor sponsor. Greystar is the largest multifamily operator in the United States and offers approximately 410,000 residencies in 130 markets worldwide with over $12 billion in gross assets under management including $3.9 billion of developments underway.

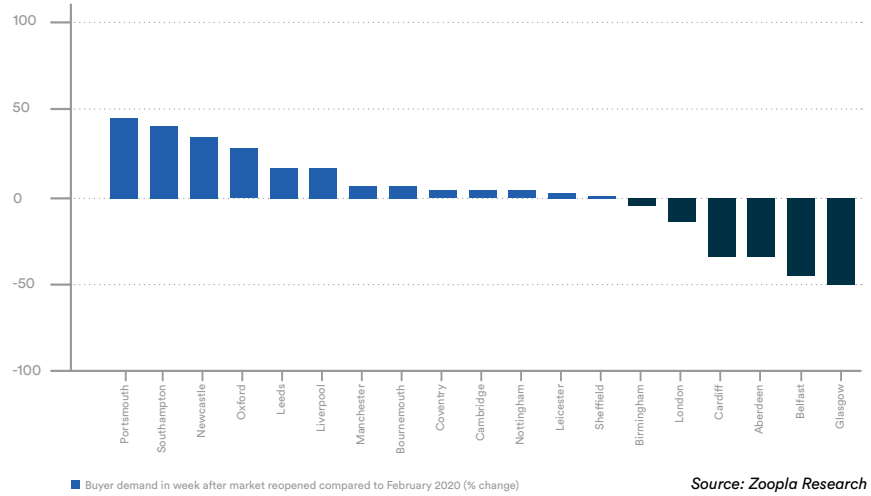
While the Build to Let segment didn't arise as a direct consequence of the Farmer Review (though coincidentally their trade body was formed in the same year) Build to Let has, as a disruptor of sorts, embraced all of the facets of the Farmer review's recommendations, in particular the widespread application of the most innovative and technologically enabling industry practices. The ilke Homes and Quintain Tipi case studies demonstrate the considerable advances technology has played in improving the quality and affordability of the UK housing stock.

Whether these will continue to be attractive to prospective occupants may be open to question particularly high rise or high density developments, but these projects are appealing in terms of relative time and cost. Looking to the very long term, an extended period of lockdown and furloughs may have a profound impact on how people think about where and how they live. The polarisation of opinion in surveys about the speed of retreat from lock down suggests a major psychological influence on large sections of the population has already taken hold.

Moreover, where people want to live will itself change, as will what people want and expect from their domestic arrangements, including the amount of space and its layout in order to make home-working more readily compatible with domestic life. There are potentially enormous future rewards here for the construction and home improvement industries.

Demand has surged in England's regional cities

Interest in London, however, remains subdued



Source: Zoopla Research

Key Sector Updates

If we examine the broader construction sector, away from house building, PRS and BtR, the Covid pandemic has also created good opportunities for the industry. Changes in working and shopping habits, travel frequency and patterns, and other ways in which our routines have altered combine to generate new needs and the infrastructure and investment to deliver them. These, in most respects, were already 'trending' but the Covid experience brings greater urgency to accelerate to a higher level.

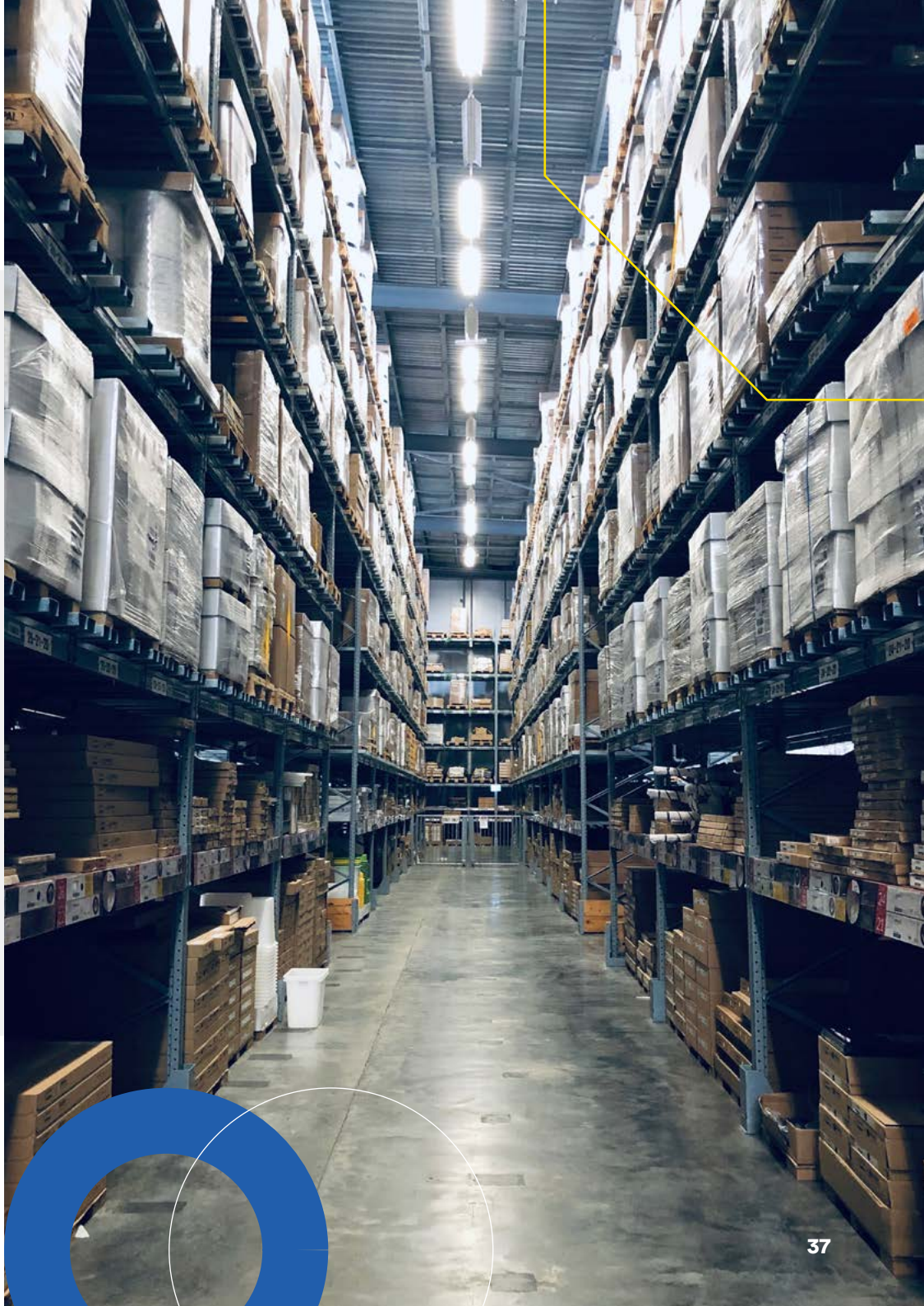
Logistics Sector

From a demand perspective in the logistics sector, *"Savills has recorded over 3m sq ft of new requirements for warehouse space since 16th March 2020 adding prudent levels of speculative development should mean that the market is well prepared to weather the storm on the demand side, assuming we head back towards some level of normality in the second half of the year."*

"Longer-term unintended consequences for the market could be the further growth of online grocery shopping, as many consumers, who previously didn't use such services, become more familiar and continue to use it in the future. Should this happen grocers will have to add capacity at a faster rate than previously anticipated."

If one thinks more expansively about the logistics segment, and assuming e-commerce trends continue if not accelerate, and if we imagine working from home becomes a permanent state for even a small percentage of the population, train journeys and flights continue to be restricted, one instinctively has to question the value of the vast acreage devoted to car parking spaces, and how these may be usefully re-purposed as an overall 'greening' of cities. This compelling video makes the point vividly if such commuting patterns persist, many if not most will have started their journey from a now empty car park

One idea could be to use abandoned parking spaces as logistics facilities at the edges of cities and at the end of the major distribution arteries for onward smaller scale distribution. Some of these ideas are already being applied elsewhere, such as students at the Nantes Atlantique design school had the idea of making the Nantes hyper-center into an urban logistics hub. The space becomes a central platform for receiving parcels for businesses and individuals. Delivery tricycles are parked there to help manage the last kilometre, always a problem in the city centre. The space can also be used



to test future mobility ideas such as delivery by drone and use of the roof and its ramp to channel packages.

https://www.theagilityeffect.com/en/article/10-ideas-for-repurposing-city-car-parks/

In the UK, the Make Shift Company built a hub for small businesses in a former parking garage in Brixton, inner south London. Here, the innovation focuses on the underground. These windowless structures do not lend themselves to office space. They can be converted into warehouses, or, under the right circumstances, into data centres.

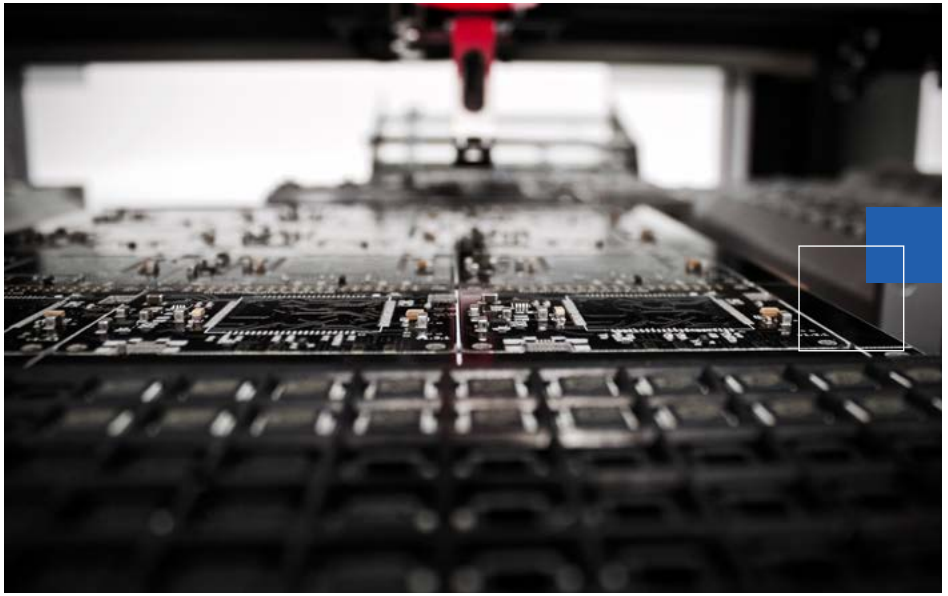
Digitalisation and Digital Infrastructure

On **digitalisation and digital infrastructure**, our research suggests Network reliability and resilience is currently top of mind among consumers. Broadband and mobile providers' ability to ensure robust connectivity is consumers' top priority, with only 12% disagreeing and believing speed is more important.

Professor William Webb is an expert on the telecommunications industry. We asked him about possible systematic stresses, to which he replied: *"Broadly, networks in developed countries should not be unduly stressed by the changes resulting from Covid-19. There may be contention at the local exchange, or into widely used servers (e.g. BBC, Netflix) which may slow things down somewhat but that might just mean we have to watch in HD rather than UHD. I am not aware of any reports of network meltdown or similar. In developing countries, or places where the home broadband is poor, the situation may be very different as mobile networks are overloaded by the increase in demand."*

Covid-19 has forced a dramatic acceleration in digital service adoption, with many people trying online services for the first time due to the crisis. Nearly half surveyed said they would be happy to use automated customer service and virtual assistants creating an opportunity for the TMT providers to improve customer experience and significantly reduce costs by leveraging intelligent automation and AI.

The Covid-19 recovery will be digital with recent data showing we have vaulted five years forward in consumer and business digital adoption in a matter of around eight weeks. Banks have transitioned to remote sales and services teams and launched digital outreach to customers to make flexible payment arrangements for loans and mortgages.



Fully 75% of people using digital channels for the first time indicate that they will continue to use them when things return to normal.

Reflexively, **data centres** are thought of as being at the epi-centre of what is of critical importance to continuing operations during lock down, and this is corroborated by one industry insider. Mark Lawrence is the CEO of publicly listed T. Clarke plc, a mechanical and electrical systems (M&E) specialist. He recently told Construction News, a trade publication *"The company is not solely looking to the public spending to provide more opportunities, it also expects demand for data centres to hold up".* Lawrence says *"The data centre market is very buoyant. The market is growing, and we see many opportunities in it. We see it as a gap-filler as well, where some of the bigger commercial developers are pausing to see how the market goes, data centres provide us with a good opportunity for additional work."*

In an article published in May edition of Data Economy 'The Role Of The Data Centre In The Future Of Data Management', Susan Bowen, CEO and President of Aptum, a company offering managed hosting, cloud, collocation and connectivity services noted:

"We are now operating in an environment where data is the lifeblood of modern society and has revolutionised the business landscape. And as a result, the role of the data centre is changing. Recent research has revealed

that in the years between 2000 and 2019, the average spending growth for data centres was only 4 per cent, but for cloud services it was 56 per cent. This is not to say that data centres no longer fulfil crucial storage duties.

The next stage for the data centre is to embrace the interaction between private and public cloud, IoT, edge computing and 5G within a true hybrid solution. Hybrid solutions will increase the speed of interaction of high volumes of data between disparate digital locations, from when it is first collected to where it is managed.

As faster speeds from 5G, and the ability of AI improves on-the-spot decisions, computing at the edge will increase substantially. More data will be processed on-site, increasing the need for edge data centres. According to Global Market Insights, the edge data centre market is expected to reach $16 billion by 2025. With the power of 5G, edge data centres will bring businesses' data closer to the end-user improving access and performance.

The immediate future of the data centre, in either edge or hyper-scale form, lies within hybrid and multi-cloud structures. This will ensure maximum interaction between data obtained from emerging technologies. In fact, the data centre itself could harness the potential of these technologies to improve its own efficiencies."

On the issue of **5G**, however, some informed commentators have urged caution. Prof William Webb, again: *"The 5G business case has a significant investment - in spectrum licenses, in equipment, in marketing, in network upgrade and potentially in new core networks and edge computers. The timescales to recover the investment are probably ten years - the typical time between generations of cellular technology (although between 4G and 5G there has only been eight years). But where is the revenue?*

Most accept that there will not be more revenue from consumers. Cellular ARPUs have been in gentle decline for years, the transition from 3G to 4G did not result in any uplift, and 5G does not have compelling benefits for consumers. Some operators are already offering 5G at no additional cost.

This means that the 5G business case is predicated on finding new sources of revenue. There are few, if any, potential customers asking for 5G capabilities, so the wireless industry has been taking its solution - 5G - and searching for a problem that might need it. Over the last few months I have been looking at the applications that the industry is hoping will provide the revenue to balance the business case and in this article I bring together those pieces of analysis. The results are not pretty."

From a **communications**' angle, almost half of the country accesses their internet through early 20th century copper wire infrastructures. The UK is ranked 35th out of 37 countries assessed by the OECD for the proportion of fibre connections in its total fixed broadband infrastructure, with only 13% of households having full-fibre connection, and just 47% of those living on a low income use broadband internet at home.

It is widely accepted that the only way of future-proofing our digital infrastructure system is to roll out widespread Gigabit-capable infrastructure. Some Asian cities already have 100% coverage. Rising to the challenge, Greg Mensch, chief executive of CityFibre says: *"We will be ready to accelerate our full fibre rollouts to eight millions homes across the country, so more and more homes have access to fit-for-purpose digital connectivity."*

It should be recalled the Prime Minister's commitment to improving UK communications infrastructure. From his general election campaign launch: *"Gigabit broadband, gigabit broadband eight years ahead of schedule sprouting through every... through every home, like a kind of, a very informative vermicelli, I don't know exactly what gigabit broadband is, but it's going to be fantastic for our country, where we are going to have an infrastructure revolution across the UK."*

Energy and Power Sector

From the energy & power sectors, a number of recent investment initiatives:

Scottish Power is to spend £150m on developing a clean energy cluster in central Scotland, sufficient to give 100,000 homes electricity. In renovating Hagshaw Hill (first Scottish wind farm), and building two more on nearby sites SP will create a 220MW cluster, capable of supporting 600 at peak, 280 long-term. Scottish Power has also announced it wants to develop 1000 MW of onshore wind/battery storage.

Keith Anderson, CEO of SP: *"we're kick starting as many of our projects as we can so they are ready to help boost the economy when the pandemic ends. These projects help funnel money back through the supply chain and into jobs...they also make sure that the economic recovery is based on sustainable investments."*

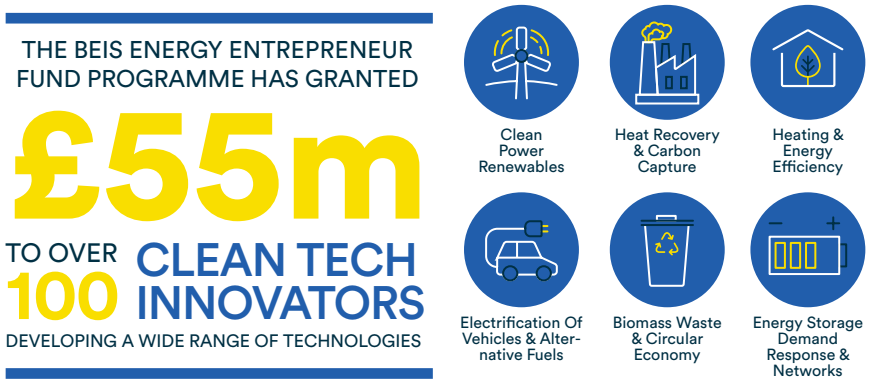
SSE/Equinor will use Port of Tyne as operations base for Dogger Bank wind farms. 200 permanent jobs are to be created. Business Minister, Alok Sharma noted *"Dogger Bank and other projects will be key part of green and resilient economic recovery, lead into net-zero 2050 target"*. Stephen Bull, head of Equinor UK said *"£9bn Dogger Bank will bring investment to UK at a challenging time for us all", while Matt Beeton, chief executive of Port of Tyne commented "overhaul project and wind farm are extremely important for wider region in terms of economic benefits."*

If the UK is to increase its reliance upon renewables the country will need at least 30GW of energy storage if it hopes to reach net zero by 2050, according to new research – current capacity stands at 3GW. The analysis, produced by Imperial College for energy giant Drax's Energy Insights paper, states that as intermittent generation from renewables like wind and solar grows, the country will have to increase its storage capacity tenfold.

Storage technology has already proven its value, as when lightning hit on Friday 9 August 2019 causing first the Little Barford CCGT plant and then the Hornsea wind farm to trip leading to electricity blackouts, within 4 minutes grid frequency had been restored to its usual operating limits.

Energy storage will play a pivotal part in the UK's 2050 net zero ambition, and there is already considerable activity in the sector. Energy storage developer Penso Power has won necessary approvals to install a 150MW battery near Swindon, south-west England, the largest project of its kind in Europe.

The company recently secured land rights, planning permission and a grid connection offer for an additional 50MW expansion for its 100MW Minety project, which started construction preparatory works late last year. The initial 100MW battery is expected to enter operation in autumn 2020, while the additional 50MW, to be built on adjacent land, will enter operation in 2021.



Conclusion

House building and housing provision we know rate second only to health in both the priorities of the public and politicians in the UK. We have heard, too, from personal experience, the House Building Federation (HBF) have been making valuable representations on behalf of their members. We have also heard of the frustrations of dealing with local authorities on matters of planning and approvals.

There have been several examples of encouraging news flow, be it successful re-capitalisation of important sector players, reservations and bookings holding up far better than originally expected on new housing schemes, several large project announcements during the pandemic – City of London plans submitted to move historical Smithfield and New Spittalfield markets to join the Billingsgate version at a purpose built site at the former Barking Reach Power Station, as a case in point – and the urgency with which companies active in the industry have moved to ensure revised HSE protocols are implemented and enforced. Homes England has agreed funding packages worth £309m allocated from the government's £4.5bn Home Building Fund to accelerate construction at three major London developments which have a total capacity for up to 20,000 new homes. Institutional investment is showing it has a significant role to play as the Legal & General examples attest.

In the very short term there are several advantages to earmarking funds for environmental benefit, such as retrofits, boiler replacement schemes, insulation improvement and such like which will benefit in particular SMEs and smaller operators. These are all positive signs of the construction sector gearing up to play its very significant role in the recovery, and we must not overlook how the Boris Johnson government had intended to play its hand in delivering the 'levelling up' manifesto.

In the current pandemic, however, the 'watch what I do, not what I say' approach may in current circumstances better inform how players in this sector should prepare their businesses. Smart technology applications mean JCB know when their machines are active and being used so they have accurate data reflecting real activity. A senior source at the company told us demand and prices for 14m telescopic handlers have 'tanked', and virtually no excavators are currently deployed because no ground is being prepared.

Ibstock, one of the country's largest suppliers of bricks to the house building industry, noted that while trading conditions have started to improve volumes currently remain around 70% below the comparative period and in light of these conditions announced *"We have entered into consultations with employees across the Group as part of a series of restructuring proposals, with up to 375 positions, representing around 15 % of the Group's total workforce, potentially impacted as a result of these actions.*

Whilst the changes anticipated will ensure our business is adapted to the near-term industry demand outlook, we retain the flexibility to scale production back up, as and when demand recovers." These reports and actions are not indicative of a sustainable near-term rebound. Constructors build to sell and if there is no demand they just stop, without penalty as most of their workforces are subcontracted and they already own the land so they simply stop buying materials. https://www.eastmidlandsbusinesslink.co.uk/mag/news/375-at-risk-at-ibstock/

Of perhaps more concern is the issue of public confidence. What has been striking to us in our research is the persistently high resistance among those polled to further release from lockdown. An Ipsos poll recently said 54% thought the government is moving too quickly and only 13% too slowly. This is a potentially damaging matter for any immediate recovery hopes, and suggests large numbers of the public remain very cautious and potentially fearful of a return to work.

This sustained polarisation of public opinion on the issue suggests expectations of a 'V' shaped recovery may be too optimistic. As David O'Leary from the HBF points out: *"an extensive period of enforced lock down maybe has encouraged a large section of the population to think properly about how and where we live? What premium attaches to a garden, however small, or a balcony?"* A new home is the ultimate big ticket item.

The instinct to survive always trumps the need to adapt, at least in the first iteration. This is a primal and ungovernable force, and is as prevalent in corporations as it is in human nature. It would be foolhardy, reckless, indeed, not to take these perfectly natural reflexes into account when reckoning on the journey out of the crater created by Covid-19. For the house building sector this leads us to forecast recovery will come in the form of a 'W' with March 2021 the more likely starting point from which a new base will be formed.

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